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ABSTRACT

Three Army programs in English as a second language (ESL) are evaluated. The programs had lengths of 3 weeks, 6 weeks, and 6 months. The evaluation was carried out with a standardized group test of English comprehension, an individually administered test of oral proficiency, questionnaires, observations, followup questionnaires and tests, informal techniques, and curriculum analysis. Most of the soldiers in the programs were well-educated Puerto Ricans with weak oral English skills. The programs' length and content varied widely. All three produced gains in English proficiency, with gains increasing with the program length. ESL training was found to be positively related to lowering of attrition rates. Although ESL participants generally liked their programs and teachers, they felt the need for more practice in conversational skills. Supervisors were generally supportive of the programs and made qualitative decisions between soldiers scoring 50 or more and those scoring less than 50 on the standardized test. Evaluation results suggest a need for greater emphasis on spoken English, more realistic expectations of what can be accomplished in a short time, and systematic training of Army ESL teachers. The need for ESL in the Army is affirmed, and the possible lowering of the current criterion of language proficiency is discussed. (MSE)

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Research Report 1354

English-as-a-Second-Language Programs in the Army

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November 1983

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This report describes an evaluation of three Army English-as-a-second-language (ESL) instructional programs, 3-week, 6-week, and 6-month. The evaluation used multitrait, multimethod design. Results showed that most of the soldiers in Army ESL programs were well educated Puerto Ricans whose English-speaking skills were weak. The three programs differed considerably in their length, content, and "functionality." All three programs produced gains in English proficiency as measured by a standardized test. The longer the training time, the greater the gains. Oral proficiency (Continued)

20. (Continued)

data showed that 6-week students gained at about the same rate as 3-month students in some skills but not others. ESL was found to have some positive relationship to lowering of attrition rates. Although ESL participants generally liked their programs and teachers, they felt the need for more practice in conversation skills. Supervisors were generally supportive of the programs and made qualitative distinctions between soldiers scoring 50 or more on the standardized test and those scoring 50 or less. Implications of the results concern key characteristics of ESL programs, the need for ESL in the Army, and the validity of typically used cutoff scores on the standardized test.

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English-as-a-Second-Language Programs in the Army

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FOREWORD

The Instructional Technology Systems Technical Area of the US Army Research Institute for the Behavioral and Social Sciences performs research and development in educational technology with applications to military education and training. A major focus of this research is the development of information on which the Department of the Army can base decisions about its Basic Skills Education Program.

This report describes and evaluates three of these programs, all related to English-as-a-second-language as taught to Army trainees. Data collection was supported by the Office of the Adjutant General and the Training and Doctrine Command.

EDGAR M. JOHNSON
Technical Director

EXECUTIVE SUMMARY

Requirement:

To evaluate the effectiveness of Army English-as-a-second-language (ESL) programs of various lengths and types.

Procedure:

Three ESL programs--six-week, three-month, and six-month--were evaluated with a standardized group test of English comprehension, an individually administered test of oral proficiency, questionnaires, observations, followup questionnaires and tests, informal techniques, and curriculum analysis. Procedures were designed with the support of the Adjutant General's Office and the cooperation of the Training and Doctrine Command.

Findings:

Most of the soldiers in ESL programs were well educated Puerto Ricans whose English speaking skills were weak. The three programs differed considerably in their length and content, particularly their degree of "functionality." All three programs produced gains in English proficiency as measured by the standardized test. The longer the training time, the greater the gains. Oral proficiency data showed that six-week students gained at about the same rate as three-month students in some skills but not in others. ESL was found to have some positive relationship to lowering of attrition rates. Although ESL participants generally liked their programs and teachers, they felt the need for more practice in conversation skills. Supervisors were generally supportive of the programs and made qualitative distinctions between soldiers scoring 50 or more on the standardized test and those scoring less than 50.

Utilization of Findings:

The findings have relevance for scientists and administrators in military education and training and for all personnel who deal with limited English proficient soldiers. Implications of the results concern key characteristics of ESL programs, the need for ESL in the Army, and the validity of typically used cutoff scores on the standardized test of English comprehension.

ENGLISH-AS-A-SECOND-LANGUAGE PROGRAMS IN THE ARMY

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ENGLISH-AS-A-SECOND-LANGUAGE PROGRAMS IN THE ARMY

INTRODUCTION

This report presents results of an evaluation of English-as-a-second-language (ESL) training programs in the Army. These programs are part of the Army's Basic Skills Education Program (BSEP). ESL instruction is offered to soldiers who need greater English proficiency to function well in the Army. The focus of this report is ESL as taught before or during basic training (BT). Results are reported for three programs, the standard, six-week ESL program given in 1982 at six training bases and two one-time, experimental programs--one a three-month and the other a six-month program--conducted for the Army in 1981-1982 at the Defense Language Institute English Language Center (DLIELC) at Lackland Air Force Base, Texas.

This evaluation is important because it concerns ESL, which becomes increasingly more critical as the number of limited English proficient persons in the United States grows. It is an example of multitrait-multimethod research conducted in difficult, "real world" settings. It also reflects the joint efforts of several agencies, namely the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI), which conducted the research through contract to the American Institutes for Research (AIR); the Office of the Adjutant General, which supported the research; and the Training and Doctrine Command (TRADOC), which provided essential cooperation in many areas of the research.

The Problem

The Army estimates that at least 5% of the present enlisted force has English language comprehension problems. We can expect this percentage to increase over the next decades as the armed services induct increasing numbers of limited English speakers. Recruits who have trouble understanding and speaking English find it difficult to complete training successfully. In the training environment language difficulties are associated with many problems: culture shock, difficulty in following directions and understanding written material, low motivation, and safety problems, according to TRADOC (1982). Similarly, a recent study by the Navy found that limited-English-speaking Hispanic recruits had higher attrition rates, reduced promotion potential, and decreased job efficiency compared to English-speaking recruits (Salas, Kincaid, & Ashcroft, 1980). These correlates of limited English proficiency have high costs for the military. It is necessary to find ways to train limited English proficient recruits so that they can perform well in the armed services, and this training will likely involve some form of ESL.

ESL Approaches: Traditional and Modern

Traditionally, foreign or second languages were taught as grammar and translation courses with more emphasis on reading than on communicating. However, the needs of the military and the foreign service to produce fluent speakers of foreign languages led to the development of intensive courses that emphasized oral rather than reading skills. The methods developed in these contexts filtered back to high schools and into adult language programs. These methods were based on the common-sense principle that, in order to speak a language well, one has to practice speaking it (Anthony & Norris, 1972).

Drawing on the principles of behavioral psychology, developers of foreign language and ESL courses created the audio-lingual or aural-oral method. In a purely structural audio-lingual ESL course, trainees learn different sentence structures through pattern drills. The purely structural approach is limited because of difficulties in transfer of training from the classroom to the "real world" (Crandall, 1979).

Purely structural ESL gave way to more situational or "functional" ESL, in which structures are taught and practiced in the context of dialogues reflecting situations the trainees might normally encounter outside the classroom. Making the situations relevant addresses not just transfer of training but also motivation (Knowles, 1978; Schumann, 1978). Moreover, functional situations provide the opportunity to teach culture as well as language. A relatively new development is the movement to a more generalized functional curriculum organized around speech acts (e.g., making requests, asking for clarification, expressing an opinion) rather than based on situations. This is known as a "notational-functional" curriculum (Crandall, 1979).

Carroll's (1967) work on foreign language learning among college students is relevant for all types of ESL approaches. Carroll found that the major variable influencing foreign language competence was the amount of time the student was involved in using the language. Research on "time on task" (Denham & Lieberman, 1980) substantiates the importance of the time factor for academic progress.

Until 1982 the Army's ESL training was mainly structural. In 1982 a more functional, Army-related ESL course was initiated, but the Army has not yet moved to functional-notational ESL. Different lengths of programs have been piloted by the Army with an understanding that the time variable might be important. The current research concerns three of the Army's structurally oriented ESL programs of varying durations: six weeks, three months, and six months. Data will be collected later on the functional ESL program.

Evaluation Questions

In the context of the problem and the ESL approaches described above, the investigation focused on five key questions:

Question 1: What were the characteristics of students in the ESL programs?

Question 2: What were the characteristics of the three ESL programs?

Question 3: Did any of the three programs improve soldiers' ability to use English?

Question 4: Did any of the three programs result in lower attrition rates for soldiers?

Question 5: What were the perceptions of ESL students and their supervisors toward ESL programs?

METHOD

This section discusses subject, data gathering procedures, and statistical analysis.

Subjects

The subject pool consisted of participants in three ESL programs, including a six-week regular program, a three-month experimental program, and a six-month experimental program (see Table 1). The six-week regular program during fiscal years 1979 through 1981 (FY79-81) involved 2,804 participants, for 2,232 of whom standardized test data are available. A nonmatched comparison group consisting of 1,679 eligible nonenrollees was used for some analyses. The three-month experimental program involved 151 soldiers (of whom 148 graduated) and had a nonmatched comparison group of 99 soldiers. Comparison group data for the three-month experiment are not reported here because they are still being gathered. A total of 200 participants (of whom 186 graduated) and 200 controls matched on ESL eligibility were part of the six-month experiment. Some of the control group members received no English training in the Army, while others attended the six-week regular course. The control group was pretested at Army entry and posttested nine months later. Optimally, posttesting would have been six months later, but Army operational schedules precluded this.

Table 1

Number of Subjects from Three ESL Programs Participating in Individual Data Collection Procedures

Program	Group	Total	Number by procedure: Standardized test (ECLT) N	Oral proficiency test N	Questionnaire N
Six-week	Treatment group	2,304[a]	2,232[a,b]	33[c]	500[c]
	Treatment group in followup	2,804[a,d]	-	-	-
	Unmatched comparison group	1,679[a]	1,679[a]	-	-
Three-month	Treatment group (began)	151	148	43	146
	(graduated)	148			
	Treatment group in BT[e] followup	116	-	-	116 by students 135 by supervisors[f]
	Treatment group in AIT[g] followup	113	-	-	113 by students 95 by supervisors[f]
	Unmatched comparison group (no followup)	99	99	-	-
Six-month	Treatment group (began)	200	186	-	130
	(graduated)	186			
	Treatment group in BT[e] followup	132	-	-	132 by students 109 by supervisors[f]
	Treatment group in AIT[g] followup	98	-	-	98 by students 86 by supervisors[f]
	Matched control group	200	200	-	-
	Matched control group in followup	175	50	-	-

[a]TRADOC record data, FY79-81.
[b]Counts only those who completed at least five weeks.
[c]Site visit data, FY82.
[d]Attrition data only.
[e]Basic training.
[f]Some supervisors had several ESL soldiers.
[g]Advanced Individual Training.

Data Gathering Procedures

The three programs were evaluated with a standardized group test of English comprehension, an individually administered test of oral proficiency, questionnaires, observations, followup questionnaires and tests, informal techniques, and curriculum analysis. Not all these methods were used for every program, in part because the six-month program had been completed before field data collection began and in part because the large data base is strictly archival.

Standard Group Test of English Comprehension

All three programs were evaluated through the use of the English Comprehension Level Test (ECLT). The ECLT was administered before and after the experimental programs, with interim testing approximately every two weeks during the programs. For the six-week program, the ECLT was given before and after training and, at some installations, as a midterm exam. The ECLT was developed by DLIELC. Forms are replaced annually. Each form has 120 items. All items are multiple-choice with four possible answers per item. Respondents mark answers on a separate answer sheet. Lexical items comprise 75% of the test content, and the remainder of the test contains structural items. Two-thirds of the test are devoted to a combination of listening and reading, and the balance is purely reading (DLIELC, 1980).

The ECLT has high reliability and validity. Internal consistency and alternate forms reliability are in the .80-.90 range (DLIELC, 1980). When correlated with adult basic education tests and tests of English as a foreign language, the ECLT has concurrent validity coefficients in the .79-.83 range (DLIELC, 1980; Mebane, 1980; Oxford-Carpenter, Leopold, & Duvall, 1982). Although the perils of language testing have been clearly noted (Troike, 1983), the ECLT appears to have both psychometric merit and operational utility.

Individually Administered Test of Oral Proficiency

About one-third (N=43) of the three month group and 1.4% (N=33) of the six-week group were chosen to take a newly developed, individually administered test of oral language proficiency at the beginning and the end of their ESL training. Three-month participants were randomly selected within each of the three ECLT levels to take the oral test. Soldiers sampled in the six-week program were those who entered the program at a given installation during the week of the evaluator's first visit; they received the oral test as a posttest five weeks later.

The oral test was developed by the American Institutes for Research (AIR) to determine an individual soldier's skill levels in English comprehension and speaking. The test includes overall scores for production and comprehension and subscores for fluency, pronunciation, grammar, vocabulary, and specific comprehension. The test was built on the Foreign Service Institute model but includes content relevant to military life and involves some pictorial cues. Preliminary concurrent validity data show that the subtests correlate .70-.89 with the ECLT. Furthermore, pre-post gains on the oral test correlate with ECLT gains in the range of .50-.71 for all subtests except pronunciation and total comprehension. Interrater reliability coefficients for the subtests were .75-.99 for the six-week program sample and .80-.99 for the three-month program sample.

Questionnaires

Questionnaires about language proficiency, training, background, and attitude were given to soldiers in the six-week and three-month programs. Spanish speakers received questionnaires in Spanish. BT drill sergeants and Advanced Individual Training (AIT) instructors received questionnaires concerning perceptions about soldiers who had participated in the three- and six-month programs.

Observations

For the three-month and six-week courses, observations were made of instructional settings and techniques using a standardized form. In many instances it was possible to verify observational data through multiple visits to posts. Although observational data were not available for the six-month program, retrospective anecdotal data obtained through instructor interviews were available.

Followup

Each program had some kind of followup. Participants in the six-week program in FY79-81 were tracked by records on attrition and other variables. A followup of six-month program participants involved gathering data from BT and AIT supervisors on soldiers' attitudes, language performance, and training base adjustment. An even more elaborate followup was conducted on three-month program participants.

Informal Interviews and Observations

Informal methods, such as unstructured interviews and field notes, were used to supplement formal techniques. Unstructured Spanish-language interviews with program participants proved to be particularly important.

Curriculum Analysis

Curriculum elements, including structure, texts, workbooks, tests, and other materials, were analyzed carefully for all three programs.

Statistical Analysis

Because most of the analyses concerned the total population rather than a sample, and because those samples which were used were not randomly assigned, descriptive rather than inferential statistics were more suitable.

RESULTS

The results are presented in the order of the five questions listed earlier.

Question 1: What Were the Characteristics of the Students in the ESL Programs?

During FY79-81, at least 4,483 limited English speaking soldiers were identified as eligible for ESL instruction, with eligibility based on a score of less than 70 on the ECLT and/or on referral by commanders. ESL instruction is officially required for eligible Regular Army enlistees, although only about two-thirds actually enroll. ESL is optional for members of the National Guard and the Enlisted Reserves. These figures come from the TRADOC data base and are underestimates, since data are known to be missing. Extrapolating from the data base available during surveys of ESL classes in FY82, we estimate that the enrollment for FY82 alone was 1,500-2,000 soldiers.

Between 85% and 95% of the Army's ESL students are Spanish speakers, and most of these hail from Puerto Rico. Most of the non-Spanish speakers are from Korea and the Philippines. Puerto Rican ESL soldiers, by far the vast majority, are almost all high school graduates who are literate in their native language. Some have college experience. Most have studied English in a grammar-translation mode in school. The typical ESL soldier has some facility in reading and writing English but very weak skills in speaking English and understanding spoken English. Despite their previous language training, students' scores on the ECLT are widely distributed over the ESL-eligible range (0-70).

Question 2: What Were the Characteristics of the Three ESL Programs?

In FY82, six continental United States installations--Forts Benning, Dix, Jackson, Knox, Leonard Wood, and Sill--had regular six-week ESL programs for new recruits. Forts Gordon and Bliss had operated large programs during FY79-81, but in 1982 they did not house BT units and therefore did not have ESL programs. The ESL programs varied in size, ranging from Fort Leonard Wood with one or two teachers and an average of one soldier entering ESL per week to Forts Jackson and Dix with six or seven teachers and an average of seven to 12 soldiers entering ESL per week. The six-week programs also varied in the emphasis they placed on teaching English language structure versus military information. Although the curriculum of the six-week programs was supposed to be the American Language Course (ALC) developed by DLIELC, over time most installations replaced or supplemented the ALC with their own lessons on military information and with other teacher-made materials. The ALC is a standardized, multimodal, oral-aural program which focuses mainly on listening, reading, and pattern practice. Soldiers in the six-week programs attended class six hours a day, five days a week. At some installations ESL students were housed as a group with other basic skills trainees in one unit. They were then assigned to separate units for BT after completing the ESL course. At other installations ESL and other basic skills trainees were housed with soldiers who were already in BT; they remained in those units until completion of ESL or BT.

The first of the two DLIELC experimental programs lasted 26 weeks, or approximately six months, September 1980-March 1981. The second experimental program lasted 13 weeks, or approximately three months, August-November 1981. For the six-month program, ESL training was considered part of each recruit's enlistment obligation. Students were selected from a pool of eligible recruits. Eligible soldiers who went directly to the training base served as matched controls. Soldiers in the three-month program had to agree to extend their service obligation by three months. Both experimental programs were conducted by regular DLIELC teachers using the ALC. Soldiers in these two programs were housed as Army troops under supervision of Army noncommissioned officers (NCOs), away from Air Force personnel and foreign nationals at Lackland Air Force Base. After ESL classes soldiers were treated as a military unit and exposed to military topics by their drill sergeants. Soldiers attended ESL classes six hours per day (two hours of which were in a language laboratory), five days per week.

Question 3: Did Any of the Three Programs Improve Soldiers' Ability to Use English?

All three programs produced gains in English proficiency. Table 2 shows average weekly ECLT gains and average total ECLT gains for the three programs and for the six-month control group. As shown, participants in all three programs made substantially higher average weekly gains (ranging from 1.3 to 1.9 points) than the control group (.5 points). The variation in gain for the three programs was not great, with participants in the three-month and six-week programs achieving approximately equal average weekly gains (1.9 and 1.7 points) and participants in the six-month program gaining 1.3 points per week on the average. Average weekly gain is a convenient and useful metric for comparing programs. However, use of average weekly gain does not imply or confirm linearity of gain scores across time. It is important to note that a ceiling effect may have occurred for six-month program participants, thus suppressing their average weekly gain below that of participants in the other two programs.

The average total gain for the programs indicated, as would be expected based on Carroll's (1967) study, that the longer a soldier has ESL training, the greater the English proficiency gains. The average total gain for the six-month program was 31 points; for the three-month program, 23 points; for the six-week program, 10.2 points; and for the six-month control group, 18 points.

Figures 1 and 2 show that the three- and six-month experimental programs had similar learning curves for different levels of ECLT pretest scores. In other words, average rates of improvement in English proficiency were quite regular for both programs. Gains were made by participants in all entry ability levels.

Results of the oral proficiency test (given to six-week and three-month participants) also showed gains in English proficiency. As shown in Table 3, the six-week students gained on all measures except pronunciation, while the three-month students gained on every measure. In overall comprehension, grammar, and fluency, the six-week students gained at about the same rate as the three-month students. On the other parts of the test, the six-week students gained at slower rates than the three-month students. Most six-week total gains were 24% to 50% of the magnitude of three-month total gains. Ignoring differences in curriculum, a simple time comparison would lead to the expectation that the total gain for the six-week program would be 50% of that of the three-month program, since the six-week program was half as long as the three-month program. At this point we do not know if a different type of program would have produced greater gains in oral proficiency in six weeks.

Table 2

Average ECLT Gains by Program[a]

Program	N	Points/week	Total points gained
Six months (26 weeks)	185	1.3	31
Three months (13 weeks)	151	1.9	23
Six weeks[b]	2,232	1.7	10.2
Six-month control[c]	50	.5	18

[a]Note that these figures are not to be construed as suggesting that all gains were linear. Use of average weekly gain simply provides a comparison of programs but does not confirm linearity.
[b]Counting only soldiers completing five or more weeks. (Counting all 2,804 cases in the TRADOC base gives an average gain of 2 points/week. Soldiers who exit early, however, make unprecedented high gains in a very short time. These gains are probably spurious. Early exit was not an option in the DLIELC courses, although some soldiers reached the maximum score (80+) before the end of the course. In calculating mean gains for the TRADOC data, we set all scores below 30 to 20 to make them comparable with the DLIELC data.
[c]Over a nine-month period.

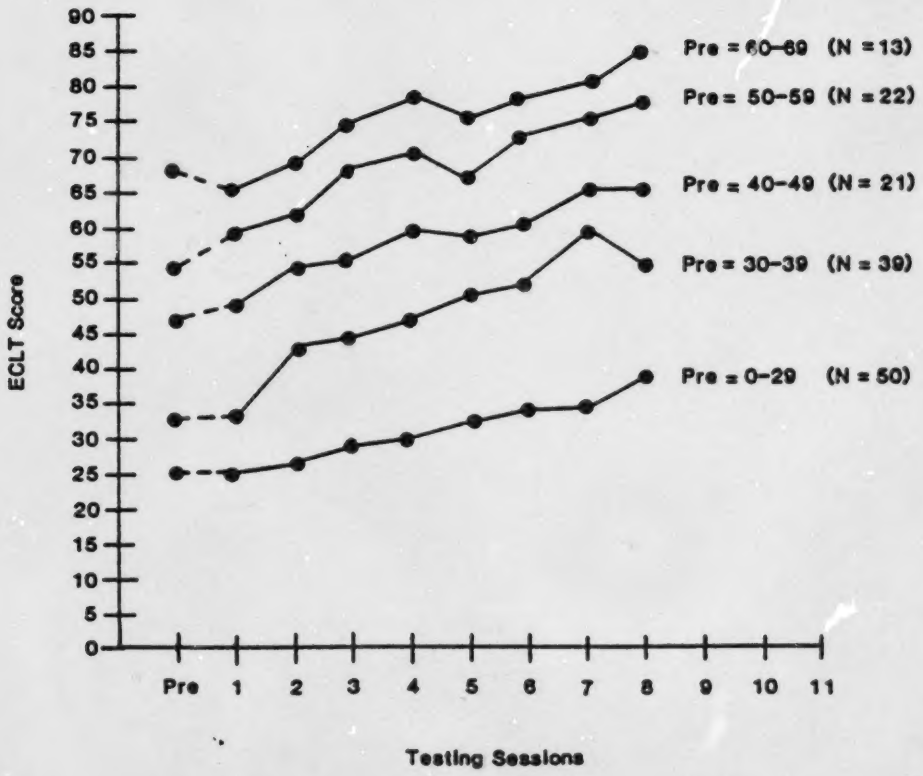

Figure 1. Median ECLT scores by testing session and initial score level for 3-month group.

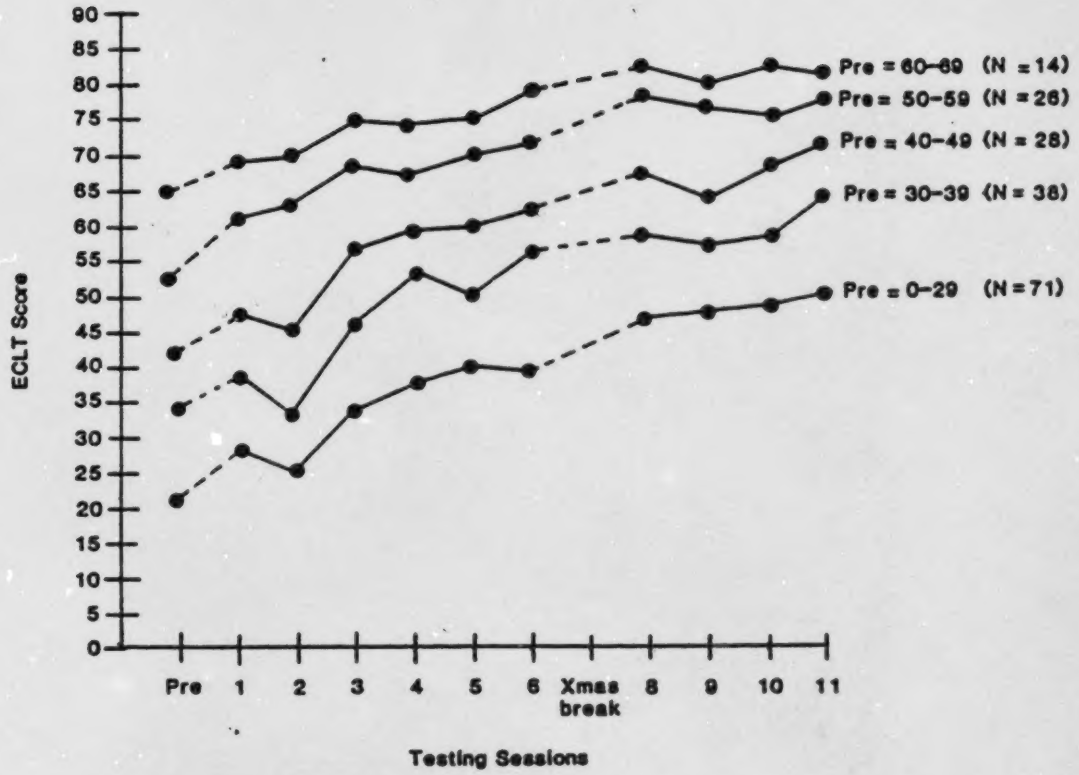

Figure 2. Median ECLT scores by testing session and initial score level for 6-month group.

Table 3

Oral Proficiency Gains for the Three-Month[a] Experimental Program Participants and the Six-Week Regular Program Participants

Oral proficiency measure	Three-month gains		Six-week gains	
	Total	Weekly	Total	Weekly
Overall comprehension	11.1	.85	5.5	.92
Overall production	3.4	.26	.8	.13
Discrete ratings:				
Vocabulary	1.1	.09	.3	.05
Grammar	1.0	.08	.4	.07
Fluency	1.0	.08	.4	.07
Pronunciation	1.0	.08	-.1	-.02
Specific comprehension	.8	.06	.1	.02

[a]13 weeks of instruction.

Table 4

AIT Failures[a] by ECLT Entry Scores for Total Six-Month Experimental Program Participants and Control Group Members

ECLT entry score	AIT failures			
	Experimental		Control	
	Percent	N	Percent	N
Below 50	0.7	1/144	8.9	13/146
50 and over	0	0/42	13.9	5/36
All scores	0.5	1/186	9.9	18/182

[a]Language and academic reasons only; indicates failed AIT or left before completing AIT.

For both groups that took the oral proficiency test, overall comprehension improved faster than overall production. This is consistent with child development literature, which shows that production may demand more practice than comprehension and may depend on comprehension.

In interpreting these proficiency data, it is important to remember that most students in Army ESL programs were Puerto Ricans who had previously studied English in school but lacked English speaking skills. Hence, Army ESL training may be considered retraining for many or most of the participants.

Question 4: Did Any of the Three Programs Result in Lower Attrition Rates for Soldiers?

The general answer to this question is that ESL training helped participants, especially lower-scoring ones, to stay in the Army. Attrition is defined here as failing AIT or leaving anytime before completing AIT. Findings for the six-month program are shown in Table 4. When six-month participants were compared with the matched control group, attrition was far greater for the control group (9.9%) than for the experimental group (0.5%). Similar comparative data are not yet available for the three-month program. For the six-week program, Table 5 indicates that the percentage of soldiers who failed or left before completing AIT was about the same for participants and eligible non-participants. Furthermore, soldiers who entered the six-week program with higher ECLT scores enjoyed no advantage over those with lower entry scores. According to these findings, then, the six-week program had no apparent effect on training base attrition; yet other data (shown in Table 6) provide some evidence of an influence of the six-week program on attrition. Table 6 indicates that higher ECLT gains are associated with lower attrition for the six-week program participants, and lower gains are linked to higher attrition. In sum, ESL participation clearly affected attrition rates for six- and three-month program students.

Question 5: What Were the Perceptions of ESL Students and Their Supervisors Toward ESL Programs?

There were mixed but generally positive perceptions about the three programs among students and their BT and AIT supervisors. Highlights of the questionnaire results are presented below.

Table 5

AIT Failures[a] by ECLT Entry Scores for Six-Week Program Participants and Eligible Nonparticipants in FY79-81 Data Base

ECLT entry score	AIT failures			
	Participants		Eligible nonparticipants	
	Percent	N	Percent	N
Below 50	6	135/2,132	6	62/1,034
50 and over	5	33/672	2	16/645
All scores	6	168/2,804	5	78/1,679

[a]Language and academic reasons only; indicates failed AIT or left anytime before completing AIT.

Table 6

AIT Failures[a] by ECLT Gain for Six-Week ESL Program Participants

ECL gains (points)	Percent	N
None	13	61/462
1-15	6	77/462
>15	3	30/984
Totals		168/2,804

[a]Language and academic reasons only; indicates failed AIT or left anytime before completing AIT.

Perceptions About the Six-Week Regular Program

More than 90% of the participants said that their English had improved at least a little since they joined the Army, at which time they began their Army ESL training. More than 90% said their teachers care about their learning English and try to help them, and 80% said they like the way their teachers teach ESL. Most students (76%) expressed good feelings about the overall ESL program. Almost all students (95%) who completed the course expressed greater communicative competence than they felt when they entered the Army. However, almost all students (92%) also reported the need to improve speaking and understanding English. They perceived speaking to be their greatest weakness and felt that they received too little training in speaking and listening. Even after five to six weeks of training, nearly half the students rated themselves as "poor" or "not at all" in speaking English, and two-fifths rated themselves similarly in understanding spoken English. Eighty-five percent said they needed more chances to practice speaking English in class, and nearly 90% said they did not get enough opportunities to talk with English speakers. Respondents attributed their English improvement more to encounters with English speakers outside of class than to classroom activities, particularly at posts where ESL students were billeted with English speakers.

Perceptions About the Three-Month Experimental Program

As in the six-week program, most soldiers who participated in the three-month program wanted more instruction in conversation skills and less instruction in reading English. Understanding spoken English was the highest need expressed by these soldiers when followed up in BT (56%), while speaking English was the highest need they mentioned in AIT (86%). In both BT and AIT, supervisors' ratings closely reflected exit ECLT scores of soldiers. Soldiers scoring 50 and above on the exit ECLT tended to receive higher ratings by BT and AIT supervisors for understanding, speaking, reading, and writing English than did soldiers who scored less than 50 on the exit ECLT. BT and AIT supervisors rated ESL soldiers higher in speaking and understanding English than in reading and writing English. This may be explained by the fact that these supervisors did not have much opportunity to observe soldiers' reading and writing skills. In contrast to their supervisors, ESL soldiers rated themselves as least competent in speaking English in both BT and AIT. In BT they felt themselves most competent in reading English, and in AIT they said they were most skilled in understanding classroom lectures. Supervisors gave high ratings to the motivation of ESL participants.

Perceptions About the Six-Month Experimental Program

Six-month program graduates who had exit ECLT scores below 50 were far more likely to be rated by AIT instructors as "extremely limited" in English speaking and understanding than were graduates

with 50+ exit ECLT scores. Specifically, 23% of the below-50 graduates were considered extremely limited in understanding, and 14% of the below-50 were considered extremely limited in speaking, compared to 4% and 2% of the 50+ graduates. BT drill sergeants' ratings were in the same direction, but the difference between below-50 and 50+ was less pronounced.

Summary of Results Across Questions

Most of the soldiers in ESL programs were well educated Puerto Ricans whose English speaking skills were weak. Programs differed considerably in their length and content (particularly in their degree of "functionality"). All three programs that were investigated produced gains in English proficiency as measured by the ECLT. The longer the training time, the greater the gains. Oral proficiency data showed that six-week students gained at about the same rate as three-month students in some skills but not in others. ESL was found to have some positive relationship to lowering of attrition rates. Although ESL participants generally liked their programs and teachers, they felt the need for more practice in conversation skills. Supervisors were generally supportive of the programs and made qualitative distinctions between soldiers scoring 50 or more on the ECLT and soldiers scoring less than 50.

POLICY IMPLICATIONS

This section presents three main policy implications. First, Army ESL programs need to be based on certain key characteristics suggested by theory and research. Second, questions about the need for ESL can be answered only if several considerations are included. Third, the validity of the ECLT exit score of 70 needs to be examined further for various Army uses.

Characteristics Needed in Army ESL Programs

The programs evaluated had mildly positive results. Current ESL theory suggests that changing to a more functional program might produce much more dramatic results. Information from the interviews, observations, and questionnaires also indicates that Army ESL programs might be improved by greater emphasis on teaching spoken English; realistic expectations about what can be achieved in a given amount of time; and systematic training of Army ESL teachers, most of whom have not taught ESL before contracting to teach for the Army.

Need for ESL in the Army

Four factors affect the need for ESL in the Army: demographics, ecomomics, evaluation, and ethics. Demographics show that there is a large ESL-eligible population in the Army. The high Hispanic growth rate will increase the number of recruitment-age Hispanics in the next few decades. Some individuals argue that if the recession continues, the Army will have such a large pool of eligible recruits that it will no longer have to induct limited English proficient soldiers at all. However, if the economy improves and the pool of eligible English speaking recruits shrinks due to availability of nonmilitary jobs, the Army may find once more that it needs high caliber, limited English proficient soldiers who can be trained in ESL. In that case, good ESL training would be essential for the Army. Program evaluation data also relate to the need for ESL. As seen in this report, English proficiency levels can be improved through ESL training in as short a time as six weeks, and the longer the training time, the more improvement can be made. Evaluation data also show effects of ESL on attrition and perceptions. Finally, the ethical factor relates to the need for ESL. It may not be ethical to deny some Americans, such as Puerto Ricans, the opportunities for career development that the Army offers because those Americans do not speak English as their native language.

Validity of ECLT Exit Score of 70 for the Army

The Army has implicitly accepted DLIELC's criterion of English language proficiency: an exit score of 70 on the ECLT. DLIELC developed this standard over years of empirical testing with foreign nationals. The Army needs to investigate whether the criterion of 70 is relevant to its own uses. That score may be relevant to some ESL soldiers and not others--depending on their Army jobs, their ability to communicate nonverbally, and the assistance network available through peers and supervisors. Data should be gathered on the predictive utility of any proficiency score in terms of performance on the job. Some of the data presented above indicate that 50 is a criterion that might be relevant for some Army uses. However, lowering the proficiency standard from 70 to 50 could have a negative effect on trainees' long-term opportunities in the Army by pushing ESL soldiers out of the program before they have received maximum benefit. It must also be noted that any proficiency standard is somewhat arbitrary, and human judgment is involved in the process of determining who is a competent English speaker and in what situations. Empirical data will help make these judgments more rational in the Army setting and will be particularly important if the Army ever develops an open exit program based on attainment of a particular criterion score.

CONCLUSIONS

This report presents background on the Army's language problem and on ESL approaches. It also offers research questions concerning three Army ESL programs, procedures in evaluating the programs, results of the evaluation, and implications. General conclusions are that ESL is a necessary and worthwhile training effort for the Army and that its effectiveness could be enhanced by considering optimal program characteristics and reasonable proficiency standards for ESL participants.

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